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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. 93-125

NPDES NO. CA0078859

WASTE DISCHARGE REQUIREMENTS
FOR
SCHAEFER OIL COMPANY
MOUNT POSO OIL FIELD
KERN COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board) finds that:

1. Schaefer Oil Company (hereafter Discharger), a California corporation, submitted a Report of Waste Discharge (RWD), dated 16 October 1992, and applied for permit renewal to discharge waste to surface waters of the United States under the National Pollutant Discharge Elimination System (NPDES). The RWD also includes discharges not regulated under the existing NPDES permit. Supplemental information to complete filing of the application was submitted on 4 September 1992.
2. The Discharger owns and operates crude oil producing wells in Jones, Kelly-Knapp, Fowler, Central, and Lambert leases in the Mount Poso Oil Field. Oil and water is generated as part of the oil production. The leases are in Sections 20, 21, 28, 29, and 32, T26S, R28E, MDB&M, with surface water drainage to Little Creek, a Valley Floor Water, as shown on Attachment A, a part of this Order. The leases are within six miles of a 3,000-acre ranch owned by the Discharger.
3. Mount Poso Oil Field is about 10 miles north and northeast of Bakersfield in Kern County. The oil field covers an area of about 55 square miles. The climate is dry with hot summers and mild winters. The primary land use in the area is oil field related, with a small portion of the area dedicated to cattle grazing.
4. The Board adopted Order No. 88-017 (NPDES No. CA0078859) on 29 January 1988, which prescribes requirements for discharges of oil field wastewater to unnamed tributaries of Little Creek.
5. Order No. 88-017 does not reflect current operations of the Discharger and policies of the Board, and expired on 29 January 1993.
6. Oil and water produced from the leases is discharged to an unlined collection reservoir (main reservoir) and from there to an oil and water separator unit (Wemco) owned and operated by the Discharger. The separated oil is pumped into oil production facilities. The separated water (hereafter wastewater) is discharged to several unlined reservoirs within the ranch; a reservoir (Reservoir C) owned by the Cawelo Water District

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(CWD); and Little Creek, an ephemeral stream and a tributary to Poso Creek, upstream and downstream of a diversion dam in section 30, T27S, R27E, MDB&M, a water of the United States.

7. In August 1992, CWD agreed to purchase up to 0.98 mgd of wastewater from the Discharger on an as-needed basis. Wastewater from Reservoir B-1, owned by the Discharger, is transported to CWD's Reservoir C through an underground pipeline. Since November of 1992, the Discharger's oil production wastewater has been discharged to Reservoir C, commingled with water from the Kern River and State Water Project, and ground water, and used for irrigation of about 17,000 acres of farm land owned by farmers in the CWD. During a high rainfall year, wastewater is discharged either to several reservoirs owned by the Discharger or to Little Creek.
8. The Report of Waste Discharge describes the wastewater as follows:

Maximum Daily Flow: 1.4 million gallons per day (mgd)

Design Flow: 1.4 mgd

Average Temperature: 78 °F Summer; 75 °F Winter

Average pH: 7.5

<u>Constituent</u>	<u>Units</u>	<u>Maximum Daily Concentration</u>
Oil and Grease	mg/l	10
Chloride	mg/l	97
Boron	mg/l	0.47
Electrical		
Conductivity (EC)	μ mhos/cm	998
Iron	mg/l	0.2
Magnesium	mg/l	0.6
Mercury	μ g/l	0.3
BOD ¹	mg/l	11.9

¹ 5-day, 20 °C biochemical oxygen demand.

9. Statewide plans and policies applicable to this discharge and not referenced in the Basin Plan include the *Policy Statement on Wastewater Discharge to Watercourses in Water Deficient Areas, Resolution No. 79-45*; the *Policy with Respect to Water Reclamation in California, Resolution No. 77-1*; and the *California Inland Surface Waters Plan (Plan)*.

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10. The State Water Resources Control Board (SWRCB) adopted the Plan on 11 April 1991. On 19 November 1992, the SWRCB adopted amendments to the Plan. This Order implements the Plan.
11. The Plan requires that effluent limitations be included in this Order for constituents with numerical water quality objectives in the Plan. Monitoring by the Discharger found only one plan-listed constituent (mercury) present in its discharge, very low levels. In response to a request by Board staff, the Discharger submitted a Technical Report by a California Registered Geologist on 15 October 1991. The report certifies that of the constituents listed in the table, only one (mercury) was detected in the waste stream and its one-hour average concentration was 0.45 $\mu\text{g/l}$. No source has been identified which would likely result in the presence of any listed substance in the waste stream other than mercury. The concentration of mercury in the wastewater is well below the primary maximum contaminant level (MCL) of 2 $\mu\text{g/l}$ for drinking water and the one-hour average of 2.4 $\mu\text{g/l}$ for freshwater aquatic life. The concentration is relatively constant in produced water. Due to the nature of the operations and the single source, the mercury concentration is expected to be consistently below the primary maximum contaminant level and the 1-hour average concentration of 2.4 $\mu\text{g/l}$ specified in the Plan. Only a limit for mercury is established in this Order.
12. The production areas that contribute to the discharge and the discharge points are depicted in a flow diagram on Attachment B, a part of this Order by reference. The number, location, and name of each discharge point is as follows:

<u>Discharge Point</u>	<u>Location</u>	<u>Receiving Reservoir or Stream</u>
1	Sec. 29, T26S, R28E	Unnamed drainage channels, tributary to Little Creek
	Sec. 4, T27S, R27E	Little Creek
2	Sec. 9, T27S, R27E	Reservoir 1
	Sec. 9, T27S, R27E	Reservoir 2
3	Sec. 3, T27S, R27E	Reservoir A
	Sec. 33, T26S, R27E	Reservoir B
	Sec. 33, T26S, R27E	Reservoir B-1
	Sec. 27, T26S, R27E	Reservoir C
	Sec. 27, T26S, R27E	Reservoir D
	Sec. 22, T26S, R27E	Reservoir E
	Sec. 6, T27S, R27E	CWD's Reservoir C

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The discharges occur in the Kern Uplands Hydrologic Area (No. 558.90) of the South Valley Floor Hydrologic Unit, as depicted on the interagency hydrologic maps prepared by the Department of Water Resources in August 1986. There are four domestic wells within two miles of the on-site reservoirs in sections 3 and 9, T27S, R27E, MDB&M.

13. The Discharger submitted a technical report (Report), *Discharge of Reclaimed Oilfield Waters to San Joaquin Hills Ranch and CWD Reservoir C*, with its RWD. The Report, prepared by a California registered Geologist, discusses proposed reclamation areas by Section, Township, and Range, types of crops to be irrigated; and amounts of produced wastewater to be furnished at each area. The Report states that the produced wastewater flows are insufficient to meet Ranch needs, and will be used to supplement water supplied by existing wells.
14. The Ranch includes six water wells drilled to an average depth of 1910 feet. The six wells have protective casings to an average depth of 905 feet, and water entry is from perforations below 905 feet. The Report concludes that the uppermost aquifer is about 600 feet below ground, and aquifers underlying the Ranch are confined and not in hydraulic communication with the ground surface. The Report estimates that water in Ranch reservoirs would reach the 600 foot depth in about 58,000 years. Reclaimed wastewater would be used largely by crops and, if it reached groundwater at all, would be in considerably reduced amounts than if left in the reservoirs.
15. Twelve geophysical logs were reviewed by a staff geologist to interpret the subsurface geology and hydrogeology on and adjacent to the San Joaquin Hills Ranch. Geophysical logs verify that there are impermeable layers totaling 350-foot above the first encountered ground water aquifer. First encountered ground water is at an average depth of 550 feet below ground surface in poorly developed sands. Deeper ground water appears to be confined from 700 to 1,600 feet and is of good quality. Based on review of the geology and hydrogeology, it is very unlikely that the use of water for irrigating crops on the San Joaquin Hills Ranch, limited discharges to Little Creek, or discharges to the reservoirs would impact or find entrance to ground water aquifers beneath the San Joaquin Hills Ranch or Little Creek east of State Hwy 65.
16. Inflow to CWD Reservoir C from sources other than the oil field wastewater averages about 32.1 mgd, with a maximum of 77.6 mgd. The ratios of inflow versus maximum expected oil field wastewater discharges are 79:1, 32.8:1, and 3.5:1 for maximum, average, and minimum flows, respectively. Water quality of Reservoir C is good and suitable for irrigation with EC, chloride, boron, and oil and grease concentrations of 230 μ mhos/cm, 15.2 mg/l, 0.19 mg/l, and 6 mg/l, respectively.

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17. The worst case scenario of water quality in Reservoir C occurs when wastewater is discharged at a maximum of 0.98 mgd; discharge quality is equivalent to the effluent limits; and other inflows to the reservoir are at a minimum of 3.2 mgd. Under these conditions water in Reservoir C exhibits the following characteristics:

<u>Constituents</u>	<u>Concentration After Mixing</u>
EC	410 μ mhos/cm
Boron	0.23 mg/l
Chloride	34 mg/l
Oil and Grease	6.9 mg/l

18. The Board adopted a Water Quality Control Plan for the Tulare Lake Basin (hereafter Basin Plan) which contains water quality objectives for all waters of the Basin. These requirements implement the Basin Plan.
19. The Basin Plan contains the following maximum salinity limits for oil field discharges to surface waters or stream channels:

<u>Constituent</u>	<u>Units</u>	<u>Concentration</u>
EC	μ mhos/cm @ 25°C	1000
Chloride	mg/l	175
Boron	mg/l	1

20. In December 1990 and January 1991, we received several complaints from the Discharger's neighbor concerning discharges of wastewater with visible oil content to Little Creek. The neighbor lives about five miles west of the oil field leases.
21. In January 1991, staff inspected the facility and observed an oil sheen in an upstream natural tributary of Little Creek, on the Discharger's Kelly-Knapp Lease. Prior to December 1990, the Discharger treated wastewater with several oil and separator tanks installed at several locations throughout the lease. The treatment tanks did not adequately treat the generated wastewater and have been replaced with a single Wemco unit.

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22. The Discharger submits quarterly monitoring reports. Effluent wastewater is sampled for EC, oil and grease, boron, and chloride. Results in monitoring reports show that the Discharger has been in compliance with the existing and proposed effluent limits since January 1991. No visible oil was observed in the discharge during inspections conducted after January 1991.
23. The Kern River Formation is the principle water bearing unit in the area of the oilfield. The direction of flow of ground water is generally to the west. A 1986 analysis of ground water from a private well downgradient from the facility shows water quality is good, with less than 0.1 mg/l boron, 290 μ mhos/cm EC, 12.7 mg/l chloride, less than 0.4 mg/l nitrate, less than 0.05 mg/l iron, and less than 0.1 mg/l arsenic.
24. The U.S. Environmental Protection Agency (EPA) and the Board have classified this discharge as a minor discharge.
25. The Basin Plan identifies beneficial uses of Poso Creek as agricultural supply; water contact and non-contact water recreation; ground water recharge; and warm and cold fresh water habitat, wildlife habitat, and other aquatic resources. The beneficial uses of Poso Creek that are realized are agricultural supply, ground water recharge, and enhancement of wildlife.
26. The beneficial uses of the underlying ground water are municipal and domestic, industrial, and agricultural supply.
27. The average annual rainfall in the area is about 6 inches.
28. The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Resources Control Board Resolution 68-16. Based on Findings Nos. 13 and 14 (above), the discharge of the reclaimed water to the Discharger's ranch, Little Creek, and the on-site reservoirs will not affect the water quality of the underlying aquifer. The discharge of the reclaimed water will result in an increase of the volume and mass of pollutants discharged to Little Creek, Reservoir C, and the aquifer underlying the farm land owned by farmers in the CWD. The beneficial uses most likely affected by the pollutants discharged (total suspended solids, chloride, and oil and grease) are aquatic life and stock watering for Little Creek; irrigation from Reservoir C; and municipal, domestic, and agricultural supply for the farm land owned by farmers in the CWD. The increase in pollutants discharged will not cause significant impact on beneficial uses and allows for the protection of ground water supplies, as well as the continued development of oil supplies, both of which benefit the people of the State.

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29. Federal Regulations for storm water discharges were promulgated by EPA on 16 November 1990 (40 CFR Parts 122, 123, and 124). The regulations require specific categories of facilities, which discharge storm water associated with industrial activity (storm water), to obtain NPDES permits and to implement Best Available Technology Economically Achievable (BAT) and Best Conventional Pollutant Control Technology (BCT) to reduce or eliminate industrial storm water pollution.
30. The State Water Resources Control Board adopted Order No. 91-13-DWQ (General Permit No. CAS000001) specifying waste discharge requirements for discharges of storm water associated with industrial activities, excluding construction activities, and requiring submittal of a Notice of Intent by industries to be covered under the permit. This Order further specified that if an individual permit is adopted for storm water runoff from a facility, then the General Permit would no longer apply. This individual permit and the provisions it contains concerning storm water relieves the Discharger from seeking coverage under the General Permit.
31. Effluent limitations and toxic effluent standards established pursuant to Sections 208(b), 301, 302, 303(d), 304, 306, and 307 of the Clean Water Act (CWA) and amendments thereto that are applicable to the discharge are specified herein.
32. Effluent limitations established pursuant to 40 CFR 435.50, et seq. (Oil and Gas Extraction Point Source Category, Agricultural and Wildlife Water Use Subcategory), are applicable to the discharge.
33. The action to adopt waste discharge requirements for existing reservoirs is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Title 14, California Code of Regulations (CCR), Section 15301.
34. The action to adopt waste discharge requirements for reclamation of produced water on the San Joaquin Hills Ranch, owned by the Discharger, is for protection of natural resources (protection of finite ground water supplies), involves no significant effect on the environment, and is categorically exempt from CEQA in accordance with Title 14, CCR, Section 13307.
35. The action to adopt an NPDES permit for discharge to Little Creek is exempt from the provisions of the CEQA (Public Resources Code Section 21100, et seq.), in accordance with Section 13389 of the California Water Code.
36. The Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for this discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

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37. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.
38. This Order shall serve as an NPDES permit pursuant to Section 402 of the CWA, and amendments thereto, and shall take effect upon the date of hearing, provided EPA has no objections.

IT IS HEREBY ORDERED that Order No. 88-017 is rescinded and Schaefer Oil Company, Inc., its agents, successors and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions:

1. Discharge of treated wastewater at locations or in a manner different from that described in Finding Nos. 8 and 12 is prohibited.
2. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Standard Provision A.13.
3. Discharge of waste classified as 'hazardous' or 'designated', as defined in Section 2521(a) and 2522(a) of Chapter 15 (Title 23, CCR, Section 2510, et seq.), is prohibited.

B. Effluent Limitations:

1. Effluent shall not exceed the following limits:

<u>Constituents</u>	<u>Units</u>	<u>Daily Maximum</u>	<u>30-Day Average</u>
Specific Electrical Conductance	μ mhos/cm	1000	
Chloride	mg/l	175	
Boron	mg/l	1	.65
Oil and Grease	mg/l	35	
Mercury	μ g/l	2.4	0.012

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2. The discharge shall not have a pH less than 6.0 or greater than 9.0.
3. The daily maximum discharge flow shall not exceed treatment capacity, which is 1.4 million gallons.

C. Receiving Water Limitations:

Receiving water limitations are based upon water quality objectives contained in the Basin Plan and Plan. As such, they are a required part of this permit.

1. The discharge shall not cause the following in Little Creek, drainage channels tributary to Little Creek, CWD's Reservoir C, or on-site reservoirs identified in Finding No. 12:
 - a. Fungi, slimes, or other objectionable growths.
 - b. The normal ambient pH to fall below 6.5, exceed 8.3, or change by more than 0.3 units.
 - c. Deposition of material that causes nuisance or adversely affects beneficial uses.
 - d. Aquatic communities and populations, including vertebrate, invertebrate, and plant species, to be degraded.
 - e. Toxic pollutants to be present in the water column, sediments, or biota in concentrations that adversely affect beneficial uses; that produce detrimental response in human, plant, animal, or aquatic life; or that bioaccumulate in aquatic resources at levels which are harmful to human health.
 - f. Violations of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board pursuant to the CWA and regulations adopted thereunder.
2. In addition to C.1 above, the discharge shall not cause the following in Little Creek, drainage channels tributary to Little Creek, or CWD's Reservoir C:
 - a. Oils, greases, waxes, or other materials to form a visible film or coating on the water surface or on the stream bottom.
 - b. Oils, greases, waxes, floating material (liquids, solids, foams, and scums) or suspended material to create a nuisance or adversely affect beneficial uses.

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- c. Esthetically undesirable discoloration.
- d. The normal ambient temperature to increase more than 2.8°C (5°F).

D. Ground Water Limitations:

The discharge, in combination of other sources, shall not cause ground water underlying the discharge locations to:

- 1. Exceed an annual average incremental increase in specific electrical conductivity of 6 μ mhos/cm, based on the most recent five-year period.
- 2. Contain chemicals, heavy metals, or trace elements in concentrations that adversely affect beneficial uses or exceed maximum contaminant levels specified in 22 CCR, Division 4, Chapter 15.
- 3. Contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses.
- 4. Contain concentrations of chemical constituents in amounts that adversely affect agricultural use.

E. Provisions:

- 1. The Discharger shall comply with all the items of the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements (NPDES)," dated 1 March 1991, which are part of this Order. This attachment and its individual paragraphs are referred to as "Standard Provision(s)".
- 2. The Discharger shall comply with attached Monitoring and Reporting Program No. 93-125, which is a part of this Order, and any revisions thereto as ordered by the Executive Officer.
- 3. Discharges of storm water must meet all applicable provisions of Section 301 and 402 of the Clean Water Act.
- 4. The Discharger shall develop and implement a Storm Water Pollution Prevention Plan within 6 months (1 February 1994) after adoption of this Order.

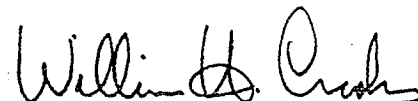
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5. This Order expires on 1 August 1998 and the Discharger must file a Report of Waste Discharge in accordance with Title 23, CCR, not later than 180 (1 February 1998) days in advance of this date in application for renewal of waste discharge requirements, if it wishes to continue the discharge.
6. The Discharger shall submit an irrigation management plan that balances crop needs with available reclaimed water and identifies specific reclamation areas for reclamation of oil production wastewater on its 3,000-acre ranch at least 120 days in advance of wastewater reclamation. The Plan shall be subject to review and approval by the Executive Officer.
7. In the event of any change in control or ownership of land or waste water treatment and discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision D.6 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code and Clean Water Act. Transfer shall be approved or disapproved in writing by the Executive Officer.

I, WILLIAM H. CROOKS, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on 5 August 1993.



WILLIAM H. CROOKS, Executive Officer

AMENDED 8/05/93
RA:fmc

Attachments

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 93-125

NPDES NO. CA0078859

FOR
SCHAEFER OIL COMPANY
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Specific sample station locations shall be established with concurrence of the Board's staff. The Discharger shall submit a description of the stations to the Board by 5 September 1993.

EFFLUENT MONITORING

Samples shall be collected at the effluent of the WEMCO unit prior to discharge. Effluent samples should be representative of the volume and quality of the discharge. Time of collection of samples shall be recorded. Effluent monitoring shall include at least the following:

<u>Constituents</u>	<u>Units</u>	<u>Type of Sample</u>	<u>Sampling Frequency</u>
Total Flow	mgd	Estimate	Daily
Specific Conductivity	μ mhos/cm @ 25° C	Grab	Monthly
Boron	mg/l	Grab	Monthly
Chloride	mg/l	Grab	Monthly
Oil and Grease ¹	mg/l	Grab	Monthly
pH	pH units	Grab	Monthly

¹ Four grab samples in a 45-minute period.

If the discharge is intermittent rather than continuous, the Discharger shall monitor and record data for all of the constituents listed above on the first day of each intermittent discharge and thereafter the frequencies in the schedule shall apply. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

If results of monitoring a pollutant appear to violate effluent limits, the frequency of sampling must be increased to daily until compliance is verified. If effluent monitoring detects a pollutant at a concentration greater than the daily maximum limit, the Discharger

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shall resample and reanalyze the discharge immediately after receiving knowledge of the exceedance. The frequency of sampling must be increased to daily until compliance is verified.

If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the Discharger shall monitor and record data for all of the constituents listed above, after which the frequencies of analysis given in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

RECEIVING WATER MONITORING

All receiving water samples shall be grab samples. Receiving water monitoring shall include at least the following:

<u>Station</u>	<u>Description</u>
R-1	500 feet upstream from the point of discharge on Little Creek
R-2	100 feet downstream from the point of discharge on Little Creek
R-3	Cawelo Water District's Reservoir C

<u>Constituents</u>	<u>Units</u>	<u>Station¹</u>	<u>Sampling Frequency</u>
pH	pH Units	R-1, R-2, R-3	Monthly
Temperature	°F	R-1, R-2	Monthly
Electrical Conductivity @25°C	μmhos/cm	R-1, R-2, R-3	Monthly
Boron	mg/l	R-1, R-2, R-3	Monthly
Chloride	mg/l	R-1, R-2, R-3	Monthly
Oil and Grease ²	mg/l	R-1, R-2, R-3	Monthly
Flow	Estimate	R-3	Monthly

* See footnotes next page

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- ¹ Discharge points R-1 and R-2 need only be monitored if there is flow in the Little Creek. Discharge point R-3 must be monitored if there is discharge to CWD's Reservoir C.
- ² Four grab samples in 45 minutes.

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by Stations R-1 and R-2. Attention shall be given to the presence or absence of:

- | | |
|---------------------------------|--|
| a. Floating or suspended matter | e. Visible films, sheens, or coatings |
| b. Discoloration | f. Fungi, slimes, or objectionable growths |
| c. Bottom deposits | g. Potential nuisance conditions |
| d. Aquatic life | |

Notes on receiving water conditions shall be summarized in the monitoring report.

REPORTING

Monitoring results shall be submitted to the Board by the **20th day of the month** following sample collection. Quarterly and annual monitoring results shall be submitted by the **20th day of the month** following each calendar quarter and year, respectively.

In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with waste discharge requirements.

If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.

By **30 January of each year**, the Discharger shall submit a written report to the Executive Officer containing the following:

- a. The names and general responsibilities of all persons responsible for the Wemco Unit and discharge (Standard Provision A.5).

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- b. The names and telephone numbers of persons to contact regarding the wastewater facility for emergency and routine situations.
- c. A statement certifying when monitoring instruments and devices for purposes of assuring compliance with this Order were last calibrated, including identification of who performed the calibration (Standard Provision C.6).
- d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment facility as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.

The Discharger may also be requested to submit an annual report to the Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

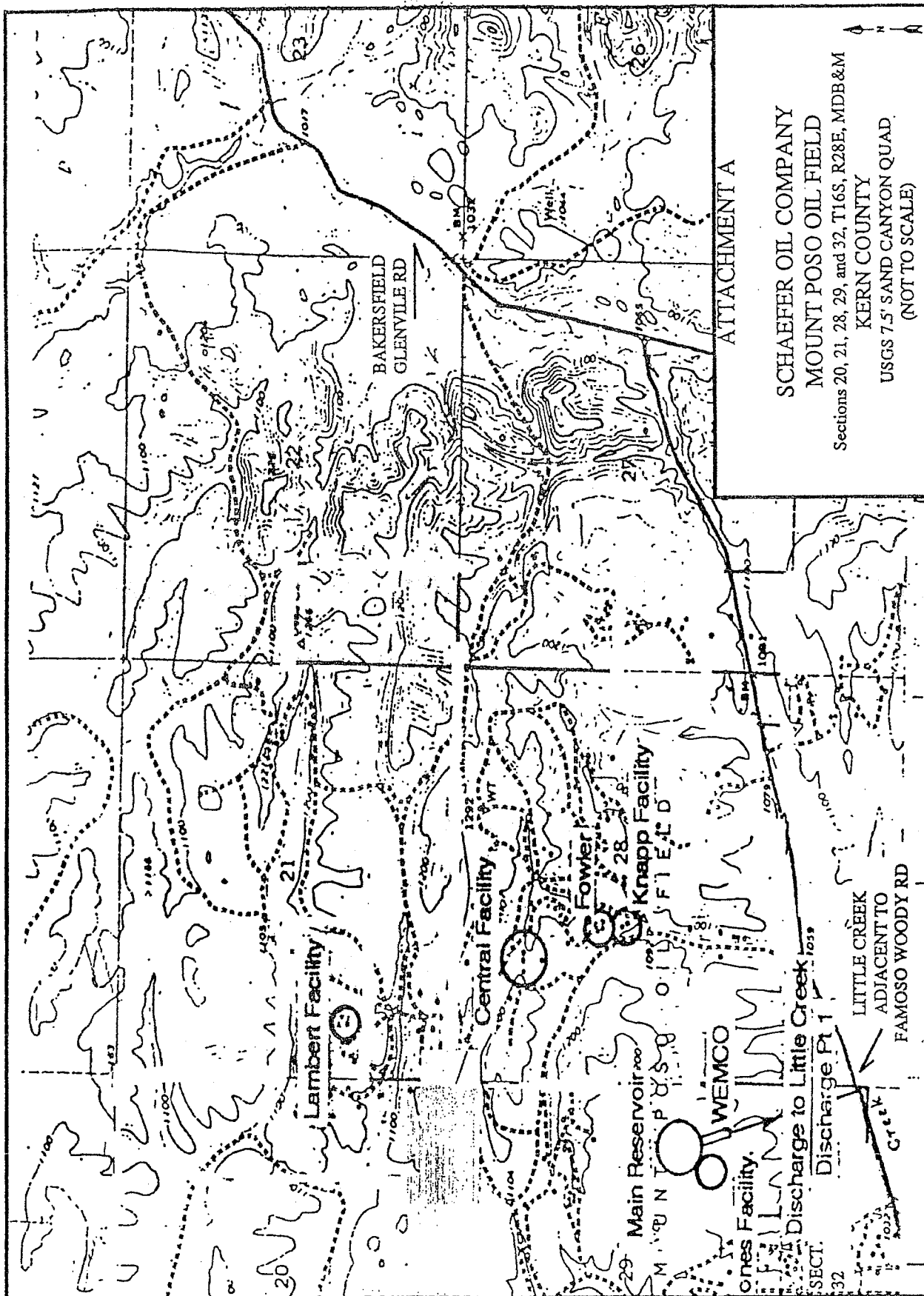
All reports submitted in response to this Order shall comply with the signatory requirements of Standard Provision D.6.

The Discharger shall implement the above monitoring program on the first day of the month following effective date of this Order.

Ordered by William H. Crooks
WILLIAM H. CROOKS, Executive Officer

5 August 1993
(Date)

AMENDED 8/05/93
RA:fmc



ATTACHMENT A

SCHAEFER OIL COMPANY

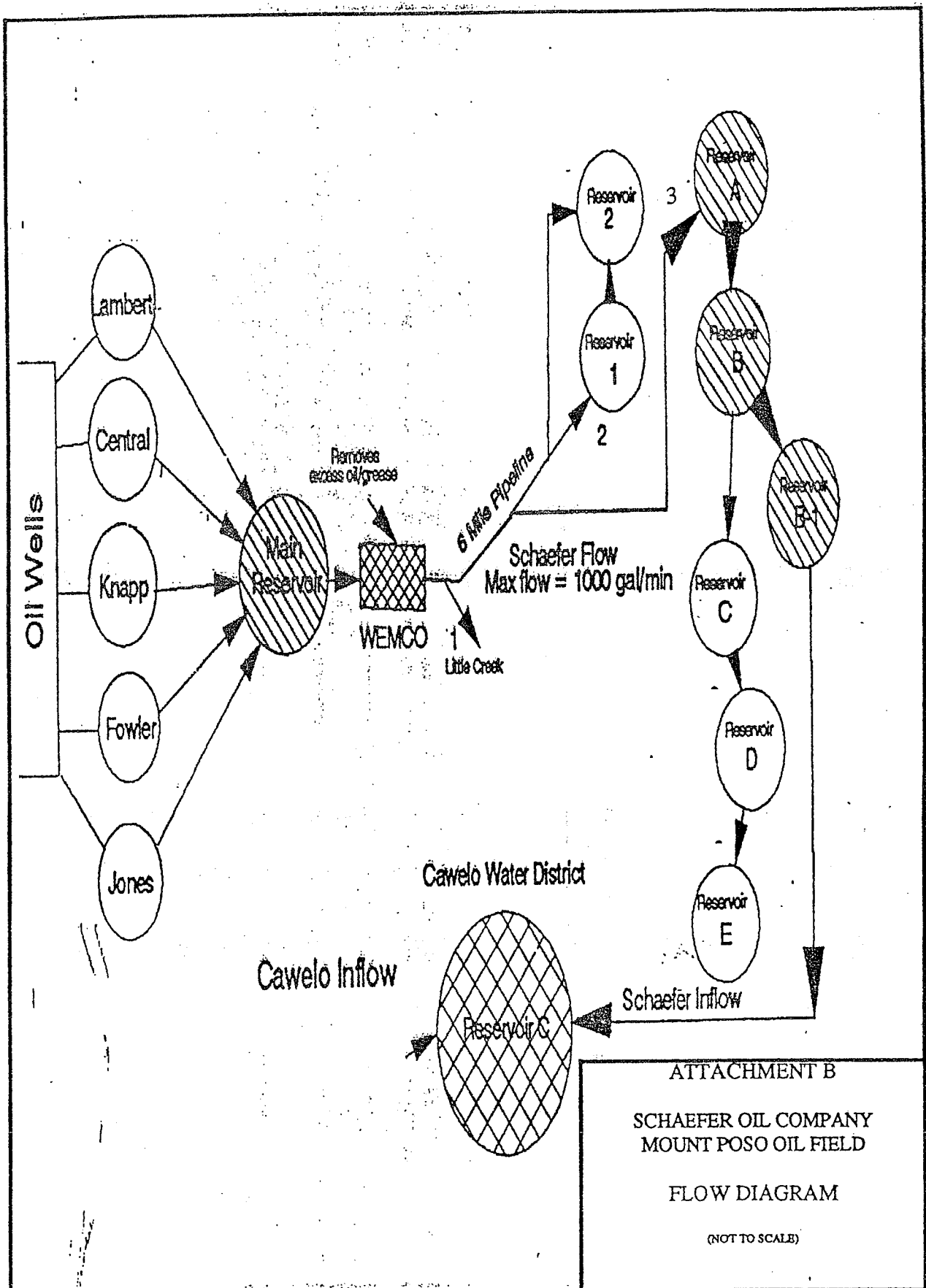
MOUNT POSO OIL FIELD

Sections 20, 21, 28, 29, and 32, T16S, R28E, MDB&M

KERN COUNTY

USGS 7.5' SAND CANYON QUAD.

(NOT TO SCALE)



INFORMATION SHEET

SCHAEFER OIL COMPANY MOUNT POSO OIL FIELD KERN COUNTY

Schaefer Oil Company (hereafter Discharger), a California corporation, submitted a Report of Waste Discharge (RWD) and applied for permit renewal and revision to discharge waste to surface waters of the United States under the National Pollutant Discharge Elimination System (NPDES).

The Discharger owns and operates crude oil producing wells in the Jones, Kelly-Knapp, Fowler, Central, and Lambert leases in the Mount Poso Oil Field. Mount Poso Oil Field is about 10 miles north and northeast of Bakersfield in Kern County. The leases are within a 3,000-acre ranch known as the San Joaquin Hills Ranch, owned by the Discharger. The oil field covers an area of about 55 square miles. Oil and water produced from the leases is discharged to a collection reservoir (main reservoir) and from there to an oil and water separator unit (Wemco) owned and operated by the Discharger. The separated oil is pumped into oil production facilities. The water is discharged to any or a combination of eight unlined reservoirs within the ranch; a reservoir (Reservoir C) owned by the Cawelo Water District (CWD); and Little Creek, an ephemeral stream and a tributary to Poso Creek, a Water of the United States.

CWD contracted to purchase up to 0.98 mgd of wastewater from the Discharger on an as-needed basis. Wastewater from Reservoir B-1, owned by the Discharger, is transported to CWD's Reservoir C through an underground pipeline. During a high rainfall year, wastewater is discharged either to several reservoirs owned by the Discharger or to Little Creek.

The discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Resources Control Board Resolution 68-16. The impact on water quality will either be localized or insignificant. Inflow to CWD Reservoir C from sources other than oil field wastewater averages about 32.1 mgd, with a maximum of 77.6 mgd. The ratios of inflow versus maximum expected oil field wastewater discharges are 79:1, 32.8:1, and 3.5:1 for maximum, average, and minimum flows, respectively. Water quality of Reservoir C is good and suitable for irrigation with EC, chloride, boron, and oil and grease concentrations of 230 μ mhos/cm, 15.2 mg/l, 0.19 mg/l, and 6 mg/l, respectively. Under the worst case scenario, water quality in the reservoir remains suitable for agriculture with maximum 410 μ mhos/cm EC, 0.23 mg/l boron, 34 mg/l chloride, and 6.9 mg/l oil and grease. There is no evidence that the slight increase will cause significant impacts on the beneficial uses of Reservoir C and aquatic life, which is the instream beneficial use most likely affected by the pollutants.

The Discharger plans to grow crops on its land in the vicinity of its reservoirs. Wastewater volumes, types of crops and general locations (Sections, Township and Range) have been determined. Produced oil field wastewater is sufficient in amounts to satisfy Ranch needs and will be supplemented with irrigation water from six wells on the Ranch.

INFORMATION SHEET - Continued

SCHAEFER OIL COMPANY
MOUNT POSO OIL FIELD
KERN COUNTY

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The Kern River Formation is the principle water bearing unit in the area of the oilfield. The direction of flow of ground water is generally to the west. Depth to ground water beneath the proposed reclamation areas on the Ranch is about 910 feet, and is confined. A 1986 analysis of ground water from a private well downgradient from the facility shows water quality is good, with less than 0.1 mg/l boron, 290 μ mhos/cm EC, 12.7 mg/l chloride, less than 0.4 mg/l nitrate, less than 0.05 mg/l iron, and less than 0.1 mg/l arsenic.

On 3 September 1992, the Kern County Planning and Development Department approved a notice of exemption for discharges of oilfield wastewater to CWD.

The action to adopt waste discharge requirements for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA) in accordance with Title 14, California Code of Regulations (CCR), Section 15301.

The action to adopt waste discharge requirements for reclamation of produced water on the San Joaquin Hills Ranch, owned by the Discharger, is for protection of natural resources (ground water supplies), involves no significant effect on the environment, and is categorically exempt from CEQA in accordance with Title 14, CCR, Section 13307.

The action to adopt an NPDES permit for discharge to Little Creek is exempt from the provisions of the CEQA (Public Resources Code Section 21000, et seq.), in accordance with Section 13389 of the California Water Code.

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION
3614 E. Ashlan Avenue
Fresno, California 93726

REVISED NOTICE OF PUBLIC HEARING

and

Notice of Application for Waste Discharge Requirements
(National Pollutant Discharge Elimination System Permit)

for

SCHAEFER OIL COMPANY
MOUNT POSO OIL FIELD
KERN COUNTY

This notice changes the time and place of a hearing on the discharger named above.

Schaefer Oil Company (hereafter Discharger), a California corporation, submitted a Report of Waste Discharge (RWD) and applied for permit renewal (NPDES No. CA0078859) and revision to discharge waste to surface waters of the United States under the National Pollutant Discharge Elimination System (NPDES). The Discharger owns and operates crude oil producing wells in the Mount Poso Oil Field. The oil and water produced is discharged to an oil and water separator unit (Wemco) owned and operated by the Discharger. The separated water is discharged to any or a combination of several unlined reservoirs; a reservoir (reservoir C) owned by the Cawelo Water District (CWD); and Little Creek, an ephemeral stream and a tributary to Poso Creek, a water of the United States.

CWD contracted to purchase up to 0.98 mgd of wastewater from the Discharger on an as needed basis. Inflow to CWD Reservoir C from sources other than oil field wastewater averages about 32.1 mgd, with a maximum of 77.6 mgd. The ratios of inflow versus maximum expected oil field wastewater are 79:1, 32.8:1, and 3.5:1 for maximum, average, and minimum flows, respectively. Under the worst case scenario, water quality in the reservoir remains suitable for agriculture with maximum 410 μ mhos/cm EC, 0.23 mg/l boron, 34 mg/l chloride, and 6.9 mg/l oil and grease.

The California Regional Water Quality Control Board, Central Valley Region, has rescheduled a public hearing on this matter for:

Date: Thursday, 5 August 1993

Time: 1:00 p.m

Place: Kings County Board of Supervisors Chambers
1400 W. Lacey Blvd.
Hanford, Ca 93230


to consider adoption of proposed waste discharge requirements. Persons wishing to comment or object to the proposed requirements are again invited to submit same in writing to the Board no later than **15 July 1993**. Comments or objections received by this date will be considered in the requirements placed in the agenda. All comments or objections will be considered and the Board may adopt the requirements.

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Anyone having questions on these requirements should contact the area engineer, Reza Afhami, at (209) 445-6188. The Board file regarding Schaefer Oil Company is open to the public for inspection, and arrangements may be made for copying, between 8:00 a.m. and 5:00 p.m., weekdays at the Board's office at 3614 E. Ashlan Avenue, Fresno, California.

Please bring the above information to the attention of anyone you know who may be interested in this matter.



BERT E. VAN VORIS, Supervising Engineer

Dated: 1 July 1993